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be utilized. Furthermore, other means may be provided for supporting the plurality of records upon their common rotatable axis.

An endcap or bearing 33 is provided at the top support plate 28 while thrust bearing means, not shown, is provided at the bottom plate 27. A pulley 34 is secured to a stub shaft element, not seen on the drawing, and beneath the plate 27. A belt 36, or other drive-engaging element is wrapped about the pulley 34 and engages a drive pulley 37 associated with a constant speed reversible motor 38. While the illustrated embodiment utilizes a reversible motor for changing the direction of rotation of the stack of records, it will be understood that other reversible means, such as transmission or gear means, may be utilized.

A pair of transducers 40 and 41, preferably being of the conventional phonograph stylus type, are mounted to a tone arm 42. The tone arm 42 is mounted to a movable support plate 43, or other suitable transport means, and moved vertically along a pair of parallel spaced-apart shafts 44 and 45. The tone arm 42 includes means for biasing the tone arm in either the up direction or the down direction. Furthermore, the tone arm has an output cable 47 over which the audio signal information is delivered to suitable amplifier means 48 for reproduction in the speaker system 49.

Either the tone arm 42 separately, or the entire support plate 43 is movable toward and away from the stack of records. The styli 40 and 41 are so dimensioned so as to fit between spaced apart records such that, upon proper biasing of the tone arm, stylus 40 engages the undersurface of the top record while stylus 41 engages the top surface of the bottom record.

The tone arm 42 preferably is pivotally mounted upon a support shaft 49 to enable the tone arm to track across the record following the grooves formed therein in a conventional and well-known manner. When tone arm 41 engages the top surface of the bottom record, the stack of records 24 are rotated clockwise in a conventional manner. However, should the control of the phonograph system apply bias to the tone arm so it engages the underside of the top record, the entire stack of records rotates in a counter-clockwise direction as a result of reverse operation of the motor 38.

The movable support plate 43 is driven by a motor 50 vertically upwardly and downwardly along the support shafts 44 and 45. The support plate includes a sensing element 51 which will sense a particular selected position and stop movement of the support plate. The tone arm is then operated to place the styli 40 and 41 between a pair of records, one of which corresponds to the selected record. Suitable controls are then energized to effect the direction of bias applied to the tone arm so it will play either the top surface of the bottom record or the bottom surface of the top record. The tone arm 42 is controlled by a cam plate 46. A rod, not seen, on the back of the tone arm follows the cam cutout 46a to a machine stop position to place the tone arm over the starting groove of the record. Further travel of the cam releases the stop of the tone arm and enables it to float in the groove during the playing operation. The motor 50 may include suitable motor drive control means 52 for changing the direction of operation of the motor for raising and lowering of the support plate.

The phonograph system of this invention is greatly simplified in that the selection operation is effected by the use of the slide member 17, as described with re-

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gard to FIG. 1. The pointer 18 moves along a plurality of numbers which, in turn, may have corresponding indicia adjacent thereto to indicate the type of selection available at that location. When the slide member 17 is positioned at a desired location, the selector button 23 is depressed to insert or actuate one of a plurality of selector pins 56. The selector pins 56 are slidable between a pair of spaced-apart vertical support members 57 and 58. When one of the pins 56 is depressed, it protrudes inwardly toward the movable support plate 53 and provides a sensing finger to engage the positioning sensor 51. This will actuate the positioning device 51 and provide a control signal to stop movement of the support plate 43.

To provide means for smooth operation of the slide element 17, a pair of spaced-apart vertical slide rods 60 and 61 are provided. However, it will be understood that other means may be incorporated for providing slide operation of a selector as set forth in conjunction with the present invention.

Referring now to FIGS. 3, 4, 5 and 6, the details of construction of the coupling or spool element used to assemble the stack of records is illustrated. Here a pair of coupling elements 26 will be illustrated with a single record 24 located therebetween. It will be understood that all of the coupling elements are substantially of the same construction and only a single element need be described in detail. The coupling elements include a circular cup-shaped member 70 having an annular sidewall or sidewalls 71 and a bottom wall 72. A cylindrical post 73 is formed integral with the bottom wall 72 and extends upwardly therefrom a distance slightly greater than the upper edge 74 of the annular sidewall. The upper portion of the post 73 includes a male member 76 having a notch 77 formed substantially centrally thereof. The male member 76 is so configured to engage a recess 78 formed in a boss 79 located at the exterior surface of the bottom wall 72. The recess 78 has a protuberance 80 substantially centrally thereof to engage with the notch 77 formed substantially centrally of the male member. Therefore, the coupling members are stacked and keyed together along a central axis 81. A biasing member, here illustrated as a helical spring 82, is positioned within the cup-shaped member between the bottom wall and an apertured plate 83. The apertured plate 83 includes an aperture 84 to receive the post 72. The record 24 has the apertured portion thereof fitted over the boss 79. Preferably, the thickness of the record 24 is greater than that of the space between the apertured plate 83 and the correspondingly adjacent engaging boss portion 79 of the next coupling member. This provides means for automatically compensating for inadequacies in tolerances along the length of the stack of records and also insures that each of the records 24 will be firmly held in a fixed position relative to the axis 81 so that all of the records simultaneously rotate at an accurate playing speed. The apertured plate 84 is provided with a beveled annular edge 87 which overlies, and may engage the upper annular edge 74 of the wall 71 when the assembly is compressed. The apertured disk will therefore act somewhat as a resilient spring washer element in its environment. Furthermore, it will be noted that the boss 79 located at the lower wall of the coupling has an annular beveled surface 86 which is dimensioned so as to receive the apertured portion of the record, the inner periphery here being designated by reference numeral 84. Therefore, the flanged or